



The Monitor

A Quarterly Newsletter of the National Capital Region's Inventory and Monitoring Program

National Capital Region's Inventory and Monitoring Program: Coming to a Park and Meeting Near You!

So, you have heard about the Inventory and Monitoring (I&M) program and you know a little about what they do, but how can they benefit your division, program, or group? Well, that's what the I&M staff wants to help you figure out. The I&M staff has developed a presentation about what we do and what we can do for you, and we would like to give this presentation to your group.

Still feeling a little skeptical about the presentation and you are wondering if it will meet your needs and expectations? Perhaps you are even thinking you might be bored with text slides and a biologist talking about their interests and not yours. Well, whether you are a NPS division, program, or a group with an interest in natural resources, we will tailor the presentation to fit your needs.

Our presentation was created in PowerPoint and provides a general overview of the I&M program. We will provide examples of how we envision the I&M program benefiting you now and in the future, but we want to hear your thoughts on ways you think we might help your program.

Many groups have expressed an interest in the presentation and we are willing to travel to give it. Presentations have been given to George Washington Memorial Parkway interpretation staff and to the Washington County Chapter of the Maryland Ornithological Society.

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Have you ever noticed that working on a project plan is like rock climbing? If you do not choose a clear path, you might fall, but taking your time to find the best approach will benefit you and



Marcus Koenen, the Monitoring Coordinator for the Region's Inventory and Monitoring Program, provides an interesting and informative presentation to regional scientists at the network's monitoring workshop. (NPS Photo)

The Monitoring Program Takes Another Step.

your team in the end. The Inventory and Monitoring (I&M) staff and the Science Advisory Committee have been hard at work since last July to find that "best approach" to prioritizing the region's vital signs. Vital signs are indicators of the health of our environment which, when monitored, will provide an early warning of environmental change.

The I&M program now has a prioritized list of vital signs. This list will be reviewed by the natural resource managers within the region along with other regional staff to determine which vital signs need to have a monitoring protocol developed. Protocols will provide a "how to" approach to monitoring each vital

sign and an indication of the level of effort required. This protocol information will benefit the I&M program when determining where to focus their efforts.

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Coordinator's Corner

By Dr. Jim Sherald
Chief, Natural Resources and Science

New Personnel Provide Additional Insight to I&M

Over the past several months, a number of new faces have joined the NCR-NRS staff. I would like to take a moment to briefly introduce you to them and to highlight the assets they bring to the I&M Program.

Dan Sealy recently resigned his position as Chief Ranger at GWMP to assume the position of Deputy Chief of Natural Resources and Science for the region. The I&M team is sure to benefit from Dan's park-level experience as they work towards developing and implementing the region's monitoring plan.

Last November, Dr. Bill Lellis was hired as the NPS Coordinator for the Chesapeake Watershed CESU. Bill has a background in freshwater mussel ecology. He will be serving as a member of the I&M Program's Science Advisory Committee (SAC) to provide expertise on aquatic systems as well as helping the program by identifying sources of assistance for designing and carrying out activities under the program.

Dr. Leland Tarnay joined the staff last October as the Air Resources Specialist for the region. Lee recently completed his doctorate focusing on the ecological effects of air quality, and he will be serving on the SAC to provide insight into air quality issues and expertise for the development of monitoring protocols.

Dr. Jeff Runde joined NPS last September to serve as an Aquatic Ecologist for the National Capital and Northeast Regions. Jeff previously

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What's in the Water? The Fish of C&O Canal.

Seeing an individual with a fishing pole along the banks of the Chesapeake and Ohio Canal National Historical Park (C&O Canal) is not an unusual sight. Seeing a group of university researchers waist deep in a stream within the park is likely more uncommon. However, during the summer of 2002, both were trying their best to catch some fish. Researchers from Frostburg State University were taking part in the regional Inventory and Monitoring program's fish inventory.

Armed not with fishing poles but electrofishing gear, the researchers waded their way through streams from Cumberland, Maryland to Georgetown. The electrofishing equipment sends a light electrical current through the water and stuns the fish. The fish are then identified and returned alive to the canal.

Surveys were conducted within ten shallow sections of the canal and 56 streams that bisect the park. Sixty-one species of fish from 12 families were identified, and a total of 13,706 individual fish were caught. That is a few more than can be found in the average fisherman's creel.

Dr. Rich Raesly, lead investigator for the fish inventory, was very pleased with the results of the first year of sampling. He believes that the occurrence of 61 species within and adjacent to the park "represents a considerable portion of the fish diversity recently recorded from within the [Potomac River] drainage". He further states that "the capture of 61 species from a narrow ribbon of park land indicates the C&O Canal NHP may be an important component of a regional conservation plan for fishes."

Although the C&O Canal was the only park sampled during 2002, five additional parks will be surveyed beginning in 2003. Information concerning the fish inventory at Antietam National Battlefield, George Washington Memorial Parkway, Harper's Ferry National Historical Park, Monocacy National Battlefield, and Continued on page: 4



Researchers from Frostburg State University identified this spotfin shiner and 60 other species of fish in streams along the Chesapeake and Ohio Canal during the summer of 2002. The research was being conducted as part of the region's Inventory and Monitoring program. (NPS photo)

There's No Taming These Shrews

For the past two years, the Inventory and Monitoring program has been engaged in a cooperative agreement with the Smithsonian Institution to conduct surveys of mammalian populations within eight National Capital Region parks: Antietam National Battlefield, Catoctin Mountain Park, C&O Canal National Historical Park, George Washington Memorial Parkway, Harper's Ferry National Historical Park, National Capital Parks – East, Rock Creek Park, and Wolf Trap National Park for the Performing Arts. Dr. Bill McShea has been the lead investigator for this project, and he and his staff completed their fieldwork in the fall of 2002. As we await the final report for the project, there are some interesting facts that we can pass along.

Most of you have probably never seen a shrew, despite their common occurrence in our parks. These elusive animals are typically smaller than a mouse, have a long-pointed nose and beady eyes, and love to eat insects. They have also been described as little bundles of energy.

Five different species of shrews were found during the recent mammalian surveys. The



By Werner Haberl (members.vienna.at/shrew).

pygmy shrew is by far the smallest of our regional mammals, and, by weight, possibly the smallest mammal in the world. It weighs about the same as a dime. Despite its small stature, it makes its existence in five of our parks: Catoctin, C&O Canal, George Washington Parkway, Harper's Ferry, and National Capital Parks- East. Three other species of shrew found in our parks are the masked, least, and smoky shrew. The masked and least shrew are only slightly larger than the pygmy shrew, and the smoky shrew weighs in at 6-9 grams (1/3 – 1/5 oz). However, do not think everything about these shrews are small. The masked shrew eats more than its

body weight in insects in a day, and if you had its heart rate of up to 1200 beats per minute, you would probably be in an intensive care unit.

The fifth shrew, the northern short-tailed shrew, found within all eight of our surveyed parks, is by far the Goliath weighing 11-22 grams. The short-tailed shrew may also be the most interesting of our shrew and mammalian species. The short-tailed shrew has poisonous saliva, though it is of no real health risk to humans.

The CESU, I&M, and YOU!

Have you ever heard of a CESU? The Inventory and Monitoring (I&M) program has and we have benefited greatly from our close association. The National Capital Region is part of the Chesapeake Watershed – Cooperative Ecosystem Study Unit (CW-CESU), a collaboration between several federal agencies and regional universities with an interest in understanding the natural and cultural resources of the region.

The National Park Service, as a partner of the CW-CESU, works with eight universities and three other federal agencies with the primary objective to foster stewardship of the environment through collaborative research, technical assistance, and education supporting integrated ecosystem management. This primary object of the CW-CESU is so closely linked to the goals of the

National Capital Region I&M program that our association has been expanding daily.

The I&M program has used the CW-CESU to establish cooperative agreements with partnering universities to conduct inventories of bats, fish and vascular plants in our regional parks, and to develop monitoring protocols. The I&M program also has plans to establish cooperative agreements with partnering universities of the CW-CESU to provide technical reviews of our monitoring plan. The I&M program has found that working closely with the partnering universities has allowed for a better developed scope of work and deliverable product at the end of the cooperative agreement. The

pre-set overhead charge of just 15% for CW-CESU projects also allows for more money to be allocated directly to the project.

Although the I&M program has been utilizing the natural resource professionals at the partnering universities, other NPS programs might benefit from the physical, cultural, and social science disciplines. So, can you think of possible collaborative projects in which the CW-CESU can benefit your program? Give Bill Lellis, our NPS, CW-CESU coordinator, a call.

For contact and other information go to: <http://cesu.al.umces.edu>



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"The Monitor" is a quarterly newsletter of the National Capital Region's Inventory and Monitoring Program.

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We know you will find the presentation informative and interesting, so contact us to schedule a presentation today.

For more information contact:
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Another Step... (continued from p. 1)

While we are still a few steps from implementing the monitoring plan, we have taken a leap forward in the planning process. With the continued help of the park and regional natural resource staff, we will continue to take the "best approach". Be sure to read the next edition of "The Monitor" for an article on the regional vital signs.

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oversaw research on stream ecology at the University of Notre Dame Environmental Research Center. Jeff will serve as a member of the SAC to provide expertise pertaining to aquatic resources within the region.

The I&M Program is sure to benefit widely from the expertise brought by these new staff. We are thrilled to welcome them aboard!

What's in the water... (continued from p. 2)

Wolf Trap National Park for the Performing Arts will be available in future issues of "The Monitor".

Coming in the Next Issue...

Vital Signs: the heartbeat of NCR
Who are those People?
Bats are not Birds, but...